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Israeli air force F-15I lands at Hatzorim military base in southern Israel

Israel and the Iranian Nuclear Infrastructure

By BRENT J. TALBOT

In a recent *Wall Street Journal* article, John Bolton asked, “What if Israel strikes Iran?”¹ Certainly there has been a great deal of media attention on this subject, particularly since Israel launched over 100 aircraft in a June 2008 aerial exercise believed to simulate an attack on Iran.² It was also rumored that during former Prime Minister Ehud Olmert’s visit to Washington in May of that year, he asked President George W. Bush for permission to overfly Iraq in order to strike targets in Iran, which Bush denied.³ If true, the denial likely delayed an Israeli attack on Iranian nuclear targets that might have otherwise occurred before President Bush left office. Now that President

Barack Obama has taken up the reins of U.S. leadership and has renewed efforts to jump-start the Arab-Israeli peace process, the question of the Iranian nuclear threat to Israel remains unresolved.

Most defense experts agree that a strike on Iranian nuclear infrastructure would only delay, and not prevent, Iran’s efforts to acquire nuclear weapons. Even the current Israel Defense Forces (IDF) Chief of Staff, Lieutenant General Gabi Ashkenazi, has admitted his belief that an aerial attack would only set back Iran’s nuclear program 2 or 3 years.⁴ With Iran’s ability to attack Israel through its proxies Hamas and Hizballah, it seems unlikely that the benefits of delaying

Iran’s nuclear program by that length of time outweigh the costs to Israel in terms of immediate, elevated threats to or within its borders. Moreover, President Bush would have had U.S. interests in mind when denying Israel a green light to bomb nuclear sites in Iran, and Bush chose not to launch such an attack himself despite speculation to the contrary and a greater capability to do so. U.S. forces in the region would be vulnerable to Iranian retaliation, and Iran certainly has the potential to disrupt ongoing U.S. peace-building efforts in both Iraq and Afghanistan. In other

Brent J. Talbot is a Professor of Military Strategic Studies at the U.S. Air Force Academy.

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words, such an attack appears unfeasible and unlikely for both Israeli and U.S. forces now or in the foreseeable future.

Still, history reveals numerous military actions that appeared unfeasible and unlikely at the time, such as the Japanese attack on Pearl Harbor, or combined Arab actions against Israel on Yom Kippur in 1973. To understand the real threat perception and likelihood of an attack by Israel, one must look into a security culture that has developed along far different lines than that which has evolved in America. The U.S. security culture, developed in a land separated from its enemies by two great oceans with friendly neighbors on its northern and southern borders, had no need to focus on security. While security became a major concern in the aftermath of Pearl Harbor and again after events of 9/11, Americans have generally been more focused on the economy or their personal lives than the survival of the United States. Moreover, there is a clearly established chain of civilian control of the military in U.S. politics, and the decision to use military force is made by civilian leadership and only as a last resort in most cases. Finally, the U.S. military is not designed to prevent attacks

on the American homeland, but to punish enemies on their own territory. Compared to the Israeli populace, living in range of missiles from enemies both near and far, the American homeland is enemy-free.

Israel is a state born of the Holocaust from which European Jewry fled, having no other place to go. Additionally, another 800,000 Jews migrated from Arab and Persian homelands to join them in Israel, some fleeing potential genocides of their own. The Jewish people have fought almost continuous wars against their Arab neighbors since the founding of the Jewish state, clashing in 1948, 1956, 1967, 1973, 1982, and 2006. They have also dealt with two major intifadas initiated by the Palestinians—as well as sporadic violence in the interim—since the 1967 occupation of the West Bank and Gaza (in 1987 and 2000).

Israeli civil society is best described as a “national security culture,” focused on the survival of a state ever involved in war or gearing up for war. Security has always taken priority over economics, personal concerns, or other governmental matters. Feelings of insecurity among the Israeli electorate are more likely to change the leadership at the political

helm than any other concern.⁵ Professor Yoram Peri confirms this view: “The centrality of security, the extensive human capital and social capital invested in the military, and the country’s institutional interests created in Israel a social structure different from that of democracies living in peace. . . . Israel exists as a nation in arms and, therefore, lacks integral boundaries between its military and society.”⁶ Moreover, there is a lack of distinction between civil and military leadership since so many former generals serve as politicians, enabling a security-focused decisionmaking process at the highest levels of government. Recent policies, such as the construction of the security barrier or “fence,” have been aimed at ending Palestinian suicide bomber infiltrations into Israel at the expense of world opinion concerning Israel’s treatment of Palestinians. And because of its effectiveness at ending the most recent intifada, Israelis applaud the barrier. Survival of the state is foremost in the minds of Israel’s politicians and citizenry, even at the expense of world acceptance.

Still, the Western perception would counter that Israel must feel more secure now than at any time in its history. It has



AP Images (Hasan Sarbakshian)

Sign reading “Atomic Power Plant” points toward nuclear facility in Bushehr, Iran

signed peace treaties with Egypt and Jordan. The Golan front has remained quiet since 1973, even after Israel's September 2007 attack on a suspected nuclear complex in Syria, which drew no retaliation. Iraq—its onetime principal threat—is no longer a concern with Saddam Hussein removed from power. Lebanon's powerful Hizballah organization has not reattacked with

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missile volleys since 2006, even though the recent so-called Gaza War (December 2008–January 2009) left Hamas clamoring for help from its symbolic ally to the north. The Gaza operation itself has stopped Hamas support for rocket attacks on Israel, at least temporarily, and the fence has ended suicide attacks. The Israeli military has proven itself the most capable in the region.

With this state of affairs in mind, I recently interviewed Israel's Director of Military Intelligence, Major General Amos Yadlin. He confirmed that Iranian nuclear efforts are Israel's number one security concern at present and that Iran is considered a much greater threat than Hizballah or Hamas, both of whom have recently been dealt with, and both of whom Israel feels have been deterred from further attacks in the near term. He believes Israel is capable of dealing with these border threats even if Iran should increase its arms supplies and encouragement to harm Israel.⁷ Though he made no mention of any plans to attack Iran, one must consider that Iran is the only remaining existential threat to the state of Israel, that reelected Iranian President Mahmoud Ahmadinejad has called upon Muslim leaders to wipe Israel off the map,⁸ and that Israel, a state always focused on its security first and foremost, has planned and trained for missions requiring the scale and distance to successfully attack nuclear sites in Iran. Bearing this in mind, one must consider that such an attack could be forthcoming, and if so, the United States and its coalition partners should immediately plan for the aftermath

as it is likely to impact operations in Iraq, Afghanistan, and the Persian Gulf.

Why Israel Might Attack

In 1981, Israel destroyed the Iraqi nuclear complex at Osirak. World opinion condemned the attack, as did the United States. Yet Israel suffered no real political consequences, and the destruction of the reactor is widely believed to have prevented Saddam from acquiring nuclear weapons in the 1980s. Some would even say the United States has Israel to thank for the fact that it did not face a nuclear Iraq during the Gulf War in 1991. In September 2007, Israel again attacked a suspected nuclear complex, this time in neighboring Syria—a country that is number two on the Director of Military Intelligence threat list—and again it suffered no consequences. The event got little publicity, in part because the Syrians themselves were slow to admit that any attack had occurred, perhaps embarrassed by their ineptitude in detecting or countering it and the potential exposure of an undisclosed nuclear program, in violation of the Non-Proliferation Treaty. Considering that in both of these instances Israel's regional nuclear-pursuing neighbors were thwarted in



Israeli Prime Minister Ehud Olmert meets President George W. Bush at White House, June 2008

AP Images (Evan Vucci)

their desires, that Israel suffered no real consequences from either engagement, and that Iran is now the third country in the region attempting to go nuclear, Israel's track record seems to indicate that an attack on Iran will occur sooner or later. Supporting this view is the comment made by Shaul Mofaz, former IDF chief of staff and then deputy prime minister, who told an Israeli newspaper, "If Iran continues to develop nuclear weapons, we will attack it."⁹

Though Mofaz no longer holds a cabinet office, the new government led by Likud leader Benjamin Netanyahu achieved victory over a Kadima-led coalition primarily due to increased security concerns from the electorate. Had Kadima's disengagement plan been successful in achieving a more peaceful environment after Israel's 2005 withdrawal from Gaza, the electorate would have left it in power. But with the Hamas takeover of Gaza and increased violence that resulted in the need for the IDF to enter Gaza during December-January 2009 (just prior to elections), the electorate favored the conservative parties, and Likud was able to engineer the current governing coalition.¹⁰ Thus, a more conservative, security-conscious government is in place. Ehud Barak,

as would be required by any peace treaty favored by President Obama, whose recent efforts to reinvigorate the peace process could increase pressure on the Israeli government to renew negotiations with the Palestinians. Noted expert John Duke Anthony believes that by attacking Iran, IDF forces would transfer attention from Israel's territories far to the east as the United States and

the likelihood of a decision to launch a preemptive strike has arguably increased with the accession of Netanyahu

international community became increasingly concerned about potential repercussions in the oil-rich gulf.¹¹ In other words, an attack on Iran might actually *reduce* pressure from the Obama administration on Netanyahu's government to make peace with the Palestinians.

At the same time the Israeli government has changed hands, U.S. intelligence sources are claiming that the "earliest possible date Iran would be technically capable of producing enough highly enriched uranium for a weapon is late 2009," though the more

deter any attack."¹⁴ Even more remarkable, intelligence uncovered by the *London Times* during August 2009 claims that Iran has openly stated that it completed its research program to weaponize uranium and could feasibly make a bomb within 1 year of a decision by Supreme Leader Ayatollah Ali Khamenei. It would take 6 months to enrich enough uranium and another 6 months to assemble a warhead that could be carried aboard the Shehab-3 missile.¹⁵ Referring back to the Osirak case, Israel struck just days before the reactor was to become operational; so if Israeli intelligence sources agree to similar assessments regarding the Iranian nuclear timetable, an IDF strike could be expected soon.¹⁶

A major argument against an IDF air-strike on the Iranian nuclear infrastructure is that it is too dispersed and hardened to be targeted with any high probability of success. But Efraim Inbar, director of Israel's Begin-Sadat Center for Strategic Studies, claims that Natanz is the key facility. Without uranium enrichment, the Iranian program cannot go forward. Inbar concludes that "all the eggs are in one basket at Natanz."¹⁷ Thus, one target is within Israel's capabilities, as was the case in Iraq and Syria.



Israel Defense Forces

Israeli Chief of the General Staff speaks at Tactical Command and Staff College in Galilee



Israel Defense Forces

Israeli Homefront Command search and rescue unit conducts training to rescue people trapped under collapsed building

another former IDF chief, remained as defense minister, and he is also an advocate of action against Iran. Thus, the likelihood of a decision to launch a preemptive strike has arguably increased with the accession of Netanyahu.

Another crucial issue concerning the elections is Netanyahu's opposition to further withdrawal from the West Bank,

probable timeframe is 2010–2015.¹² Iran also has demonstrated the capability to deliver an atomic weapon, having put a satellite into orbit during February 2009.¹³ An *Economist* assessment stated in July 2008 that the "window for military action against Iran could close within a year, because by then Iran might already have developed a bomb, or improved its air defenses sufficiently to

Natanz the Target?

Interestingly, while still in its nascent stage, enrichment operations at Natanz were suspended in November 2003 after Iran signed an agreement with France, Germany, and the United Kingdom (known as the E3). However, with Ahmadinejad's first election in 2005, Iran violated the enrichment agreement and resumed research and

development efforts at Natanz against E3 and International Atomic Energy Agency (IAEA) wishes.¹⁸ In 2006, the IAEA referred the matter to the United Nations Security Council, and since that time Iran has played a cat-and-mouse game of cooperation and noncooperation with the IAEA on the matter of uranium enrichment. During July 2008, President Ahmadinejad boasted that 6,000 centrifuges were installed at Natanz.¹⁹ This figure is double U.S. intelligence estimates, though data indicate that the facility is designed to house nearly 50,000 centrifuges when complete, and analysts believe that all the centrifuge cascades—with newer and more efficient models coming in later installments—could be fitted in 2 years and operational by 2012.²⁰

Massachusetts Institute of Technology nuclear experts agree that Natanz is the most important target in the Iranian nuclear infrastructure, though they recommend waiting until all centrifuges are in place to maximize attack effectiveness.²¹ Still other estimates state that 4,000 to 5,000 centrifuges would be enough to generate “one weapon’s worth of uranium every eight months or so,” meaning the Israeli intelligence estimate may necessitate an attack

well before all centrifuges are delivered to Natanz.²²

Nuclear experts also state that there are two more critical nodes in the nuclear infrastructure: uranium conversion facilities at Isfahan, and the heavy water plant and plutonium reactors under construction at Arak.²³ The experts’ target analysis indicates that 50 Israeli fighters (F-15s and F-16s), armed

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with appropriate global positioning system—or laser-guided penetrating bunker buster weapons, would achieve a high probability of success against these targets of concern: Natanz, Isfahan, and Arak.²⁴

Three possible routes of attack have been analyzed.²⁵ The most likely route is across Turkey, as it allows refueling over the Mediterranean during the mission for all fighters departing for and returning from target(s) in Iran. More importantly, this route mitigates the need to overfly potentially hostile Arab countries that may engage

Israeli aircraft or at least prevent refueling operations over their territory. Turkey is also an ally of sorts and was likely complicit in the 2007 attack on Syria—detachable wing tanks from an Israeli fighter were found on the Turkish side of the Syrian-Turkish border during that operation—and some even speculated that the Syrian raid was a dress rehearsal for an Iranian attack.²⁶ Such complicity indicates that Turkey might welcome overflight of its territory as in the 2007 attack. But it also leaves the option for plausible denial in the largely unmonitored airspace of eastern Turkey, and this route would mitigate the need to get a green light from the United States for the attack. The U.S. Navy-controlled Persian Gulf and U.S. Air Force-controlled Iraqi airspace would be circumnavigated. Turkey certainly shares Israeli concerns about a nuclear Iran. Turkish Prime Minister Recep Tayyip Erdoğan has stated that he cannot support Iran’s nuclear program if it seeks development of weapons of mass destruction.²⁷

Israel’s June 2008 exercise provides empirical evidence that Israel is capable of conducting a major attack on Iran. More than 100 F-15 and F-16 fighters flew over 900 miles from their bases in Israel out over

Iranian President Ahmadinejad visits new facility producing uranium fuel for planned heavy water nuclear reactor near Isfahan



AP Images (Vahid Salemi)

Israeli Minister of Defense Shaul Mofaz at Pentagon, 2002



DOD (Helene C. Stikkel)

the Mediterranean, refueled, and returned to simulate a mission that could reach Iranian targets given straight line routes from bases in Israel.²⁸ Though the actual distance is 1,380 miles per an assessment using the Turkish route to their farthest aim point in Isfahan, with the added ability to refuel on the return route, there is no reason Israeli fighters would be limited by the distance to the target. Moreover, the fact that Israel was able to conduct a mass exercise, using twice the calculated numbers of fighters, indicates that it not only could destroy the three key targets, but also the excess capacity would be available against other targets, including air defenses,

or perhaps more of the well-dispersed Iranian nuclear infrastructure.

Some might argue that even though Israel has sufficient aircraft, it would be unable to penetrate Natanz. The Iranians learned the lesson of Osirak and thus built a hardened and dispersed facility at Natanz, where two separate halls containing the centrifuge cascades are buried 8 to 23 meters underground and protected by multiple layers of concrete.²⁹ But recent sales by the United States of GBU-39 bunker buster bombs, along with earlier sales of the more capable GBU-28 to the Israeli air force, means that Israel has the weapons to do the job. Finally, Israel has

already tested both weapons in combat: the GBU-28 against Hizballah (2006) and the GBU-39 against Hamas (2009).³⁰

What about Reprisal?

The biggest argument against an Israeli attack is the expected reprisal by Iran. With influence over both Hamas and Hizballah, Iran would likely use its proxies to launch retribution attacks. A second option would be a missile barrage aimed at Israel. More worrisome for the United States would be an attack on oil shipping or an effort to close the Strait of Hormuz. While these reprisals seem more than Israel would be willing to bargain for, it has already dealt with Hamas and Hizballah, especially during the last 3 years; and both parties have been worn down by Israeli efforts to reestablish deterrence. Israel can handle terror threats from these groups, and neither is an existential threat like a nuclear-armed

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Iran. Furthermore, Israel's missile defense system could handle an Iranian missile volley. Finally, the oil threat is more of a U.S. problem, and closing the strait would be as much a problem for Iran—in need of hard currency through oil sales—as for anyone else, particularly the Chinese, who buy over half a million barrels of Iranian oil each day.³¹

Israel is likely to launch a preemptive strike in the near future against the Iranian nuclear infrastructure to prevent, or at least delay, Iran reaching the nuclear threshold. This argument goes against the typical Western security mindset as mentioned above. But the goal is to provide evidence that Israel is a security-driven society. For Israelis, "The world does not function according to principles of justice and morality, but serves as a battlefield for the disputes of actors, namely the different states. . . . Reality is shaped by the use of force."³² Diplomats like to believe that persuasion and appeasement are alternative tools in relations between states, but a security-driven society focuses on military solutions to threats, especially those that are existential. Israel perceives its adversary as a target needing preemption rather than a persuadable entity. It sees Iran's nuclear ambitions as

aimed at its small territory, which lacks the strategic depth to weather a nuclear attack. The cost-benefit analysis of a state living in the shadow of another holocaust perceives only military solutions. The United States and its coalition partners should prepare for the inevitable aftermath. **JFQ**

NOTES

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² Guy Raz, "Israel Military Sends Message to Iran, World," *All Things Considered*, National Public Radio, June 21, 2008, available at <www.npr.org/templates/story/story.php?storyId=91773676>.

³ Jonathan Steele, "Israel Asked US for Green Light to Bomb Nuclear Sites in Iran," *The Guardian*, September 25, 2008, available at <http://guardian.co.uk/world/2008/sep/25/iran.israelandthepalestinians1>.

⁴ David E. Sanger, "US Rejected Aid for Israeli Raid on Iranian Nuclear Site," *The New York Times*, January 11, 2009, available at <www.nytimes.com/2009/01/11/washington/11iran.html>.

⁵ Author interview of Reuven Hazan, Hebrew University elections expert, Jerusalem, June 4, 2009. See also Yoram Peri, *Generals in the Cabinet Room: How the Israeli Military Shapes Israeli Policy* (Washington, DC: United States Institute of Peace Press, 2006), especially chapters 1 and 16.

⁶ Peri, 29.

⁷ Author interview of Major General Amos Yadlin, Israeli Defense Forces (IDF) Director of Military Intelligence, Tel Aviv, June 14, 2009.

⁸ See Sean Yoong, "Ahmadinejad: Destroy Israel, End Crisis," *The Washington Post*, August 3, 2006, available at <www.washingtonpost.com/wp-dyn/content/article/2006/08/03/AR2006080300629.html>.

⁹ Quote from June 2008. See Steele.

¹⁰ Hazan.

¹¹ John Duke Anthony, *War with Iran: Reactions and Requirements* (Washington, DC: National Council on U.S.-Arab Relations, July 30, 2008), 18.

¹² J. Michael McConnell, *Annual Threat Assessment of the Intelligence Community for the House Permanent Select Committee on Intelligence* (Washington, DC: U.S. Government Printing Office, February 7, 2008), 13.

¹³ "Iran Launches Homegrown Satellite," February 3, 2009, available at <http://news.bbc.co.uk/2/hi/middle_east/7866357.stm>.

¹⁴ "Dangerous Games: Iran's Confrontation with the West," *The Economist*, July 5, 2008, 60.

¹⁵ James Hider, Richard Beeston, and Michael Evans, "Iran Is Ready to Build an N-Bomb—It Is Just Waiting for the Ayatollah's Order," *London*

Times, August 3, 2009, available at <http://ebird.osd.mil/ebfiles/e20090803693955.html>.

¹⁶ Ehud Barak met with Chairman of the Joint Chiefs of Staff Admiral Michael Mullen in December 2007 and briefed him on the Israeli belief that Iran could have a nuclear weapon by 2009, though 2010–2011 was more likely. See Steven Erlanger, "Israelis Brief Top US Official on Iran," *The New York Times*, December 11, 2007, available at <www.nytimes.com/2007/12/11/world/middleeast/11mullen.html>.

¹⁷ Author interview of Efraim Inbar, Colorado Springs, CO, February 10, 2009.

¹⁸ Paul K. Kerr, *Iran's Nuclear Program: Status* (Washington, DC: Congressional Research Service, November 20, 2008), 5.

¹⁹ Jon Leyne, "Iran Announces Nuclear Expansion," July 26, 2008, available at <http://news.bbc.co.uk/2/hi/middle_east/7526894.stm>.

²⁰ Kerr, 9–10.

²¹ Whitney Raas and Austin Long, "Osirak Redux? Assessing Israeli Capabilities to Destroy Iranian Nuclear Facilities," *International Security* 31, no. 4 (Spring 2007), 14–15.

²² Sanger.

²³ Raas and Long, 12–13.

²⁴ *Ibid.*, 27–30.

²⁵ *Ibid.*, 23–27.

²⁶ Peter Beaumont, "Was Israeli Raid a Dry Run for Attack on Iran?" *The Guardian*, September 16, 2007, available at <www.guardian.co.uk/world/2007/sep/16/iran.israel>.

²⁷ Yigal Schleifer, "Caught in the Fray: Turkey Enters Debate on Iran's Nuclear Program," *Christian Science Monitor*, February 2, 2006, available at <www.csmonitor.com/2006/0202/p05s01-woeu.html>.

²⁸ Donald Macintyre, "Israel's Dry Run 'Attack on Iran' with 100 Jet Fighters," *The Independent*, June 21, 2008, available at <www.independent.co.uk/news/world/middle-east/israels-dry-run-attack-on-iran-with-100-jet-fighters-851614.html>.

²⁹ Raas and Long, 17.

³⁰ Yaakov Katz, "IAF Uses New US-Supplied Smart Bomb," *Jerusalem Post*, December 29, 2008, 1.

³¹ Inbar interview.

³² Peri, 217.



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Defense Horizons 69

To Build Resilience: Leader Influence on Mental Hardiness

The military profession is inherently stressful and becoming more so for U.S. troops faced with repeated and longer deployments in multifaceted and ambiguous missions. While attention has focused in recent years on identifying and treating stress-related breakdowns, little investment has gone toward the study of healthy, resilient response patterns in people. In this paper, Paul Bartone, Charles Barry, and Robert Armstrong focus on mental hardiness, an important pathway to resilience. After reviewing the major stress factors in modern military operations, the authors summarize the theory and research behind the mental hardiness construct. They conclude with suggestions on how to increase hardiness and resilience in organizations, primarily through the actions and policies of leaders. By setting the conditions that increase mental hardiness, leaders at all levels can enhance health and performance while preventing stress-related problems.

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